L. POLYMORPHUM (Cav.) HBK. Trailing on bushes at the foot of the mountains near Santiago. All the fronds were sterile.

ANEMIA PHYLLITIDIS Sw. I found only one specimen growing on a rotten log south of San Claudio.

A. ADIANTIFOLIA Sw. One of the most abundant ferns found in Pinar del Rio Province and also found sparingly around Santiago. I found one specimen closely approaching *A. cuneata* Kze.

BLECHNUM OCCIDENTALE L. Along the trail south of San Claudio. Not abundant.

ACROSTICHUM EXCELSUM Maxon. Found in marshes around San Claudio. One colony covered perhaps an acre and stood six or eight feet high.

TECTARIA MARTINICENSIS (Spreng.) Copel. A large fern found at San Claudio growing in rich, shady ravines.

T. HERACLEIFOLIA (Willd.) Underw. Found in rocky woods near the trail south of San Claudio at 1000 ft. altitude.

STOCKPORT, IA.

Osmunda Claytoniana, forma Mackiana

E. M. KITTREDGE

Several years ago while driving near Bridgewater Corners, Vermont, Mrs. Mack of West Woodstock, Vt. noticed a colony of a dozen or more plants of a very curious Osmunda growing close to the road at the base of a steep hillside pasture. In the withered condition of the fronds it was not easy to say whether the plants were forms of *O. cinnamomea* or *O. Claytoniana*. The following year the plants were observed in fresh condition. *O. Claytoniana* was seen to be growing in great abundance and luxuriance a few rods away, the normal plants fruiting abundantly, but no fertile fronds appearing on the odd ones. The station was visited for several

years; always the plants were found beautiful and vigorous, but showing no fertile fronds. Then came a period of a few years when no visit was made. In August of 1920 I visited the station with Mrs. Mack, and to our dismay we found that in the course of widening the road the station had been almost entirely destroyed, only three plants remaining, but they were in fine condition and one bore a fruiting frond, thus proving conclusively its relationship to *O. Claytoniana*. This frond (which can be seen leaning sharply to the left in the accompanying photograph of the growing plant and appears again—the second from the left—in the print of the fronds photographed in the house the next day) and some sterile fronds from each plant were taken at that time. In October Mrs. Mack and Miss Billings visited the place and removed one plant to Miss Billings' fernery, where its growth was watched with much interest during the summer following. It produced two fine fertile fronds and three sterile, but before maturity a storm broke them down. Later three other sterile fronds appeared, but while showing the same odd form they were not half the size of the earlier ones. Late in the summer of 1921 we again visited the original station, and a very thorough search revealed three more plants on the opposite side of the road. The considerable thicket of birch and alder that had screened that side in times past had recently been cut and the place burned over. The new plants showed they had been in the thick of the fire, but small fronds were struggling up from the charred roots and all showed the odd upper portions. Our theory is that when the road was widened these roots were cast into the thicket as rubbish, but had survived their abrupt removal and had grown there contentedly, out of sight, until the cutting and burning revealed them.[1]

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[1] I am indebted to Mr. C. A. Weatherby for assistance in preparing the following description.

OSMUNDA CLAYTONIANA, FORMA MACKIANA—THE GROWING PLANT.
(Photograph by Miss E. M. Kittredge)

OSMUNDA CLAYTONIANA, FORMA MACKIANA--DETACHED FRONDS.
(Photograph by Miss E. M. Kittredge)

Osmunda cinnamomea varies frequently and rather widely and a number of varieties and forms of it have been described. *O. Claytoniana*, on the other hand, is ordinarily very uniform; but when it does, rarely, vary, it quite surpasses its relative. The one variant of it hitherto described, *O. Claytoniana*, forma *dubia* (Grout) Clute, is a remarkable plant in which the pinnules, normally close-set in this species, are separated on the pinnae almost as widely as those of *O. regalis*, and the outer ones are enlarged and pinnatifid. The fertile pinnae are partly foliaceous. The present form is even more curious in that the pinnules of the upper pinnae spread in several planes, as in some of the finely cut horticultural forms of the Boston Fern; and it is much more handsome. So striking a plant may well have a name; it is proposed to call it, in honor of its discoverer,

OSMUNDA CLAYTONIANA L., forma **Mackiana** n. f., fronds rather narrowly lanceolate, of almost the same outline as those of *Dryopteris cristata*, the blades 4.1–7 dm. long, 14 cm. in extreme width; lower 1–3 pairs of pinnae of the usual form, the remainder short, not over 5 cm. long, ovate to deltoid in outline, the mostly enlarged pinnules oblong to deltoid, spreading in different planes and often with 1–3 large obtuse or acute divergent lobes; fertile pinnae normal or often foliaceous and sterile toward the tip, the pinnules then tending to be lobed as in the sterile pinnae.—Shaded roadside at base of a hillside pasture, Bridgewater, Vt., Aug. 22, 1920, *E. M. Kittredge*, TYPE in U. S. National Museum.—PROCTOR, VT.